

Claims:

1. The use of a bacterial strain to control a target nematode, characterised in that in nature the bacterial strain is associated symbiotically with an entomopathogenic nematode.
2. The use according to claim 1, wherein the bacterial strain from nature is directly employed to control the nematode target, or is employed to give a recombinant bacterium employed to control the nematode target, or the natural or recombinant strain is employed as a source of a nematode control agent to control the nematode target.
3. The use according to claim 1 or 2, wherein the target nematode is not the same as the nematode with which the bacterial strain is found symbiotically in nature.
4. The use according to claim 1, 2 or 3, for control of helminthiasis in a human or a domesticated animal or the control of plant pathogen nematodes.
5. The use according to any preceding claim wherein the nematode to be controlled comprises one or more of *Haemonchus*, *Trichostrongylus*, *Ostertagia*, *Nematodirus*, *Cooperia*, *Ascaris*, *Bunostomum*, *Oesophagosromuni*, *Chabertia*, *Trichuris*, *Strongylus*, *Trichonema*, *Dictyocaulus*, *Capillaria*, *Heterkis*, *Toxocara*, *Ascaridia*, *Oxyuris*, *Ancylostoma*, *Uncinaria*, *Toxascaris*, *Parascaris*, *Aphelenochoides*, *Anguina*, *Bursaphalenchus*, *Criconemella*, *Melodigyne*, *Ditylenchus*, *Globodera*, *Heliocotylenchus*, *Heterodera*, *Pratylenchus*, *Radopholus*, *Rotelynychus*, *Tylenchus*, *Trichodorus*, *Xiphenema*, and *Caenorhabditis*.

SUBSTITUTE SHEET (RULE 26)

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6. A composition for the control of parasitic nematodes which comprises as an effective agent a species of bacterium which is a symbiont of an entomopathogenic nematode, or an engineered bacterium, or a nematode control agent derived from a natural or engineered bacterium.
7. A composition according to claim 6, wherein the bacterial species is of the genera *Xenorhabdus* or *Photorhabdus*,
8. A composition according to claim 7, wherein the bacterial species is of the genus *Xenorhabdus*
9. A composition according to claim 8, wherein the bacterial species is of the species *Xenorhabdus bovienii*.
10. A composition according to claim 8, wherein the bacterial species is:
Xenorhabdus bovienii strain H31 deposited with NCIMB under accession number NCIMB 40985;
Xenorhabdus bovienii strain I73 deposited with NCIMB under accession number NCIMB 40986; and
Xenorhabdus strain C42 deposited with NCIMB under accession number NCIMB 41004.
11. A composition according to any of claim 6, wherein the nematode control agent which is derived from a symbiont of an entomopathogenic nematode or from an engineered bacterium has functional activity against a nematode, and is a peptide.
12. A nucleic acid encoding a peptide of claim 11.
13. A nucleic acid according to claim 12, which nucleic acid comprises a

51

natural nucleotide sequence or a degeneratively equivalent sequence, or a functional variant thereof.

14. A nucleic acid according to claim 13, which is a homologous variant encoding a peptide which is a nematode control agent, the nucleic acid having 70% or more DNA sequence identity and/or the peptide having 70% or more amino acid sequence identity.
15. A nucleic acid according to claim 13, which is all or part of cosmid cHRIM5, in particular p 13-1f or p 14-2f, and variants thereof.
16. A nucleic acid according to claim 13, 14 or 15, wherein the variant has a sequence which is a derivative by way of addition, insertion, deletion or substitution of one or more nucleotides.
17. A nucleic acid according to any of claims 12 to 16, which is part of a longer sequence and the nematode control agent is expressed as a fusion protein.
18. A nucleic acid complementary to a nucleic acid according to any of claims 12 to 17.
19. A nucleic acid for use as a probe or primer having a nucleotide sequence of at least 15 nucleotides, which sequence is present in a nucleic acid according to any of claims 12 to 18.
20. A method for identifying or cloning a nucleic acid according to any of claim 12 for a nematode control agent, which method employs a nucleic acid probe according to claim 19.

SUBSTITUTE SHEET (RULE 26)

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52

21. A method according to claim 20, which comprises the steps of:
- (a) providing a preparation of nucleic acid from a bacterium,
 - (b) providing a probe,
 - (c) contacting nucleic acid in said preparation with said probe under conditions for hybridisation of probe to any said gene or homologue in said preparation, and,
 - (d) identifying said gene or homologue if present by its hybridisation with said probe.
22. A method according to claim 20, which comprises the use of two primers to amplify a nucleic acid encoding a nematode control agent, at least one of the primers having a conserved nucleotide sequence of at least 15 nucleotides.
23. A method according to claim 20, which comprising the steps of:
- (a) providing a preparation of nucleic acid from a bacterium,
 - (b) providing a pair of nucleic acid molecule primers, at least one of which is a primer,
 - (c) contacting nucleic acid in said preparation with said primers under conditions for performance of PCR,
 - (d) performing PCR and determining the presence of absence of an amplified PCR product.
24. A recombinant vector comprising a nucleic acid according to any of claims 12 to 17.
25. A host cell containing a vector according to claim 24 capable of replication.
26. A host cell according to claim 25 which is a plant cell.

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27. A method for producing a transgenic plant which comprises the step of regenerating a plant from a plant cell according to claim 26.
28. A plant produced according to claim 27 which is a crop species which can be maize, cotton, soya, rice, *Brassica* species, tomato, potato, sugar beet, barley, soybean, peanut, onion, rye, wheat, corn, banana, raspberry, bean, or a decorative or other plant.
29. A method of producing a peptide nematode control agent comprising causing or allowing expression of a nucleic acid according to claim 12.
30. An antibody or fragment thereof, or a polypeptide comprising the antigen-binding domain of the antibody, capable of specifically binding a peptide of claim 11.

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